SAFETY DATA SHEET
CLAW 500

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name CLAW 500

Product number MAPP NUMBER 17332

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Fungicide

1.3. Details of the supplier of the safety data sheet

Supplier

Gemini Agriculture Limited
8 Mythop Road,
Lytham St. Annes,
Lancs,
FY8 4JD
+44 (0) 845 564 6959
sales@geminiag.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 845 564 6959

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Acute Tox. 4 - H332 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Pictogram

Signal word Warning

Hazard statements

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Contains CHLOROTHALONIL (ISO)

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

CHLOROTHALONIL (ISO) **40-50%**

CAS number: 1897-45-6 EC number: 217-588-1

M factor (Acute) = 10 M factor (Chronic) = 10

Classification
Acute Tox. 2 - H330
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Carc. 2 - H351
STOT SE 3 - H335
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC)
Carc. Cat. 3;R40 T+;R26 R43 Xi;R41,R37 N;R50/53

PROPANE-1,2-DIOL **5-10%**

CAS number: 57-55-6 EC number: 200-338-0

Classification
Not Classified

Classification (67/548/EEC or 1999/45/EC)
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The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

Skin contact Remove contaminated clothing and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing. If in doubt, get medical attention promptly. Wash contaminated clothing before reuse.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information Suspected of causing cancer.

Inhalation Harmful if inhaled.

Ingestion May cause stomach pain or vomiting. May cause discomfort.

Skin contact The product contains a sensitising substance. May cause sensitisation by skin contact.

Eye contact Causes eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor There is no specific antidote. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Small fires- use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Large fires- use alcohol-resistant foam or water spray. Do not use a solid water stream as it may scatter and spread fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Combustion or thermal decomposition will evolve toxic and irritant vapours.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Inform authorities if large amounts are involved.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing.

Advice on general occupational hygiene Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Specific end use(s) For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

PROPANE-1,2-DIOL

Long-term exposure limit (8-hour TWA): WEL 150 ppm 10 mg/m³ Total vapour and particulates
WEL = Workplace Exposure Limit

PROPANE-1,2-DIOL (CAS: 57-55-6)

DNEL
Workers - Inhalation; Long term systemic effects: 168 mg/m³
Workers - Inhalation; Long term local effects: 10 mg/m³
Consumer - Inhalation; Long term systemic effects: 50 mg/m³
Consumer - Inhalation; Long term local effects: 10 mg/m³

PNEC
- Fresh water; 260 mg/l
- Marine water; 26 mg/l
- Intermittent release; 183 mg/l
- STP; 20000 mg/l
- Sediment (Freshwater); 572 mg/kg
- Sediment (Marinewater); 57.2 mg/kg
- Soil; 50 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield.
Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Other skin and body protection	Wear protective clothing. Wear chemical protective suit.
Hygiene measures	Good personal hygiene procedures should be implemented. Wash hands thoroughly after handling. Wash skin thoroughly after handling. Wash contaminated skin thoroughly after handling. Wash after use and before eating, smoking and using the toilet. Take off immediately all contaminated clothing and wash it before reuse.
Respiratory protection	A combination gas, vapour and particulate respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid. Suspension.
Colour	Grey. White/off-white. to Beige.
Odour	Slight pungent.
Odour threshold	No data available.
pH	5 – 9 at 1 % w/v
Melting point	-5°C
Initial boiling point and range	>100ºC
Flash point	> 99°C PMCC (Pensky-Martens closed cup).
Evaporation rate	No data available.
Upper/lower flammability or explosive limits	No information available.
Vapour pressure	No data available.
Relative density	1.24 g/cm3
Solubility(ies)	No data available.
Partition coefficient	No data available.

Auto-ignition temperature	No data available.
Decomposition Temperature	No data available.
Viscosity	Not available.
Explosive properties	not explosive
Oxidising properties	Not oxidising

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None known. Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid No information available.

10.5. Incompatible materials

Materials to avoid No information available.

10.6. Hazardous decomposition products

Hazardous decomposition products Combustion or thermal decomposition will evolve toxic and irritant vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,200.0
Species	Rat
ATE oral (mg/kg)	4,200.0

Acute toxicity - dermal

Notes (dermal LD_{50}) LD50 rabbit, > 20,000 mg/kg

Acute toxicity - inhalation

Notes (inhalation LC_{50})	LC50 rat, > 1.96mg/l, 4 h
ATE inhalation (vapours mg/l)	11.0

Skin corrosion/irritation

Animal data Rabbit Slightly irritating.

Serious eye damage/irritation

Serious eye damage/irritation Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation No data available.

Skin sensitisation

Skin sensitisation Buehler test - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vivo Chlorothalonil -Did not show mutagenic effects in animal experiments.

Carcinogenicity

Carcinogenicity Chlorothalonil causes kidney tumours in rats and mice via a non-genotoxic mode of action secondary to target organ toxicity.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Inhalation Harmful if inhaled.

Ingestion May cause stomach pain or vomiting. May cause discomfort if swallowed.

Skin contact Allergic rash.

Eye contact Causes serious eye irritation.

SECTION 12: Ecological Information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Acute toxicity - fish LC_{50}, 96 hours: 0.195 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC_{50}, 24 hours: 0.180 mg/l, Daphnia magna

Acute toxicity - aquatic plants ErC50, 96 hours: 0.53 mg/l, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

Biodegradation Chlorothalonil stability in water degradation half life: < 5 d at 20 °C. Not persistent in water. Stability in soil degradation half life: ca. 7 d. Not persistent in soil.

12.3. Bioaccumulative potential

Bioaccumulative potential Chlorothalonil : Chlorothalonil has low potential for bioaccumulation.

Partition coefficient No data available.

12.4. Mobility in soil

Mobility Chlorothalonil : Chlorothalonil has low to slight mobility in soil.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Do not contaminate ponds, waterways or ditches. Do not empty into drains. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Disposal methods Do not reuse empty containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

UN No. (ADN) 3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL)

14.3. Transport hazard class(es)

ADR/RID class 9

ADR/RID classification code M6

ADR/RID label 9

IMDG class 9

ICAO class/division 9

ADN class 9

Transport labels

14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ADN packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended). Health and Safety at Work etc. Act 1974 (as amended). Control of Pollution Act 1974. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
EU legislation	Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010.
Guidance	Introduction to Local Exhaust Ventilation HS(G)37. Approved Classification and Labelling Guide (Sixth edition) L131. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Issued by	HS&E Manager.

CLAW 500

Revision date	11/12/2015
Revision	1
SDS number	40345
SDS status	Approved.
Hazard statements in full	H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H330 Fatal if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.